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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/590,034	08/18/2006	Dong-hee Lee	DJKIM.GENO.PTI	2660
24943 7590 02/17/2010 INTELLECTUAL PROPERTY LAW GROUP LLP 12 SOUTH FIRST STREET SUITE 1205 SAN JOSE, CA 95113				
EXAMINER MEHTA, ASHWIN D				
ART UNIT		PAPER NUMBER		
1638				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/590,034

**Applicant(s)**

LEE ET AL.

**Examiner**

Ashwin Mehta

**Art Unit**

1638

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 09 November 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 11, 12 and 15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 August 2009 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/GS/US)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

1. The amendments filed November 9, 2009 were entered.
2. The objection to claims 11-15 is withdrawn in light of the amendments.
3. The rejections of claims 11-15 under 35 U.S.C. 112, 1<sup>st</sup> and 2<sup>nd</sup> second paragraphs, are withdrawn in light of the claim amendments.
4. The rejection of claim 13 is moot in light of its cancellation.

***Specification***

5. The specification remains objected to for failing to comply with the sequence rules of 37 CFR 1.821-1.825, for the reasons of record stated in the Office action mailed July 7, 2009. Figure 1 contains several amino acid sequences, only one of which is within the sequence listing. The sequences must be inserted into the sequence listing, and either the figure or its brief description should be amended to refer to the sequences by their assigned sequence identifiers.

Applicants did not address this objection in the response filed November 9, 2009.

6. The sequence listing filed July 29, 2008 was objected to under 35 U.S.C. 132(a) because it introduced new matter into the disclosure. In the response filed November 9, 2009 Applicants filed a substitute sequence listing, in paper and computer-readable forms, correcting the error.

However, a statement that the paper and computer readable forms of the sequence listing are the same, as required by 37 CFR 1.825(b), was not received.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 11 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Alexandrov et al. (EP 1033405A2, published September 6, 2000) and evidenced by Chen et al. (Plant J., 2005, Vol. 44, pages 396-408).

The claims are drawn towards a method for inhibiting growth in a target plant comprising (a) manufacturing an anti-sense nucleotide sequence against SEQ ID NO: 2; and (b) introducing said sequence into the target plant so that expression of the anti-sense sequence causes inhibition of plant growth; or wherein step (b) comprises transforming *Agrobacterium tumefaciens* with a recombinant vector comprising the anti-sense sequence and introducing the *A. tumefaciens* transformant into the target plant.

Alexandrov et al. isolated nucleotide sequences, including the nucleotide sequence of SEQ ID NO: 469, which encodes the amino acid sequence of instant SEQ ID NO: 2. Alexandrov et al. teach transgenic plants transformed with a vector comprising the complement of any of the nucleotide sequences taught therein, or a fragment thereof (claims), which includes SEQ ID NO: 469. Alexandrov et al. also teach *Agrobacterium tumefaciens*-mediated transformation to transform the host plant (page 329). The property of inhibiting growth of the host plant is inherent to the complementary sequence of SEQ ID NO: 469 or a fragment thereof. That growth inhibition is inherent to the transgenic plants taught by Alexandrov et al., is also evidenced by Chen et al. (Plant J., 2005, Vol. 44, pages 396-408). Chen et al. also teach the cDNA encoding instant SEQ ID NO: 2, and that mutant *Arabidopsis* plants comprising an insertional knockout of this gene are impaired for root growth and early seedling development (abstract; pages 401-402).

8. Claims 11, 12, and 15 are rejected under 35 U.S.C. 102(e) as being anticipated by Kovalle et al. (U.S. Patent Appl. Publ. No. 2009/0093620, published April 9., 2009, filed October 10, 2000) and evidenced by Chen et al. (Plant J., 2005, Vol. 44, pages 396-408).

The claims are drawn towards a method for inhibiting growth in a target plant comprising (a) manufacturing an anti-sense nucleotide sequence against SEQ ID NO: 2; and (b) introducing said sequence into the target plant so that expression of the anti-sense sequence causes inhibition of plant growth; or wherein step (b) comprises transforming *Agrobacterium tumefaciens* with a recombinant vector comprising the anti-sense sequence and introducing the *A. tumefaciens* transformant into the target plant; or wherein the target plant is *Arabidopsis thaliana*.

Kovalle et al. teach the isolated nucleotide sequence set forth in SEQ ID NO: 119,979, which encodes the amino acid sequence set forth in instant SEQ ID NO: 2. Kovalle et al. also teach transgenic plants transformed with the complement of SEQ ID NO: 119,979, or a fragment thereof, operably linked to a promoter (claim 8, for example). Kovalle et al. teach that plant transformation may occur via Agrobacterium-mediated transfer (paragraphs [0116]-[0118]), and host plants include Arabidopsis (paragraph [0091]). The property of inhibited growth is inherent to the transgenic plant. That growth of the transgenic plant is inhibited is also evidenced by Chen et al. (Plant J., 2005, Vol. 44, pages 396-408). Chen et al. also teach the cDNA encoding instant SEQ ID NO: 2, and that mutant Arabidopsis plants comprising an insertional knockout of this gene are impaired for root growth and early seedling development (abstract; pages 401-402).

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

***Contact Information***

Any inquiry concerning this or earlier communications from the Examiner should be directed to Ashwin Mehta, whose telephone number is 571-272-0803. The Examiner can normally be reached from 8:30 A.M to 6:00 P.M. If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Anne Marie Grunberg, can be reached at 571-272-0975. The fax phone numbers for the organization where this application or proceeding is assigned are 571-273-8300. Patent applicants with problems or questions regarding electronic images that can be viewed in the Patent Application Information Retrieval system (PAIR) can now contact the USPTO's Patent Electronic Business Center (Patent EBC) for assistance. Representatives are available to answer your questions daily from 6 am to midnight (EST). The toll free number is (866) 217-9197. When calling please have your application serial or patent number, the type of document you are having an image problem with, the number of pages and the specific nature of the problem. The Patent Electronic Business Center will notify applicants of the resolution of the problem within 5-7 business days. Applicants can also check PAIR to confirm that the problem has been corrected. The USPTO's Patent Electronic Business Center is a complete service center supporting all patent business on the Internet. The USPTO's PAIR system provides Internet-based access to patent application status and history information. It also enables applicants to view the scanned images of their own application file folder(s) as well as general patent information available to the public. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>.

For all other customer support, please call the USPTO Call Center (UCC) at 800-786-9199.

February 17, 2010

/Ashwin Mehta/  
Primary Examiner, Art Unit 1638